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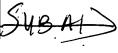
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## **CLAIMS**

- 1 Method for synchronising a robot (1) that includes a control system (2), a first robot part (3) and a second robot part (5) movably attached to the first robot part (3), whereby the position of a target (4) arranged on the first robot part (3) is determined by the passage of a sensor (6) arranged on the second robot part (5) and is compared with a calibration position in the control system c h a r a c t e r i s e d in that the target (4) is caused to include several distinct detectable changes (4a) and (4b), that the distinct detectable changes are sensed by the sensor (6), that the position (4c) of the target is calculated and that the calculated value is introduced into the control system.
- 2 Method according to claim 1 c h a r a c/t e r i s e d in that the distinct detectable changes comprise step-like structural changes.
- 15 3 Method according to claim 1 c h a r a c t e r i s e d in that the position of the target (4) is read with a sensor (6) in the form of a non-contact sensor.
  - 4 Method according to claim c h a r a c t e r i s e d in that the position of the target (4) is read with a sensor in the form of a contact sensor.
  - 5 Method according to any of the previous claims c h a r a c t e r i s e d in that the target
    (4) is designed as a groove with essentially vertical walls (4a) and (4b).
- 6 Method according to claim 1 c h a r a c t e r i s e d in that the target (4) is designed as 25 an elevation with essentially vertical sides (4a') and (4b').
  - 7 Device for synchronising a robot (1) that includes a control system (2), a first robot part (3) and a second robot part (5) movably attached to the first robot part (3) where the device includes a target (4) arranged on the first robot part (3) and a sensor (6) arranged on the second robot part (5) c h a r a c t e r i s e d in that the target (4) includes several distinct by the sensor (6) detectable changes.

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- 8 Device according to claim 7 c h a r a c t e r i s e d in that the distinct detectable changes comprise instantaneous level differences in the form of shoulder parts (7).
- 9 Device according to claim 7 c h a r a c t e r i s e d in that the target (4) is designed as a groove with essentially vertical walls (4a) and (4b).
  - 10 Device according to chair 7 c h a r a c t e r i s e d in that the target (4) is designed as an elevation with generally vertical sides (4a) and (4b).
- 10 11 Use of a method according to any of claims 1-6 or device according to any of claims 710 for an industrial robot.

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